Enactment of Comprehensive Energy Legislation is Critical in 2005

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Before the
House Committee on Energy and Commerce
Subcommittee on Energy and Air Quality

February 16, 2005

Mr. Chairman, I am John Shelk, Senior Vice President for Government Affairs of the National Mining Association (NMA). We commend you for holding this timely and important hearing to underscore the urgent need for Congress to enact comprehensive energy legislation.

National energy legislation should include policies to encourage both greater domestic production and more efficient use of energy. The need for such legislation is even more important today than when the Congress, led by this Committee, began to develop an energy bill over four years ago. We applaud you for your perseverance in pursuing comprehensive energy legislation, including the hard work that went into fashioning the conference report for H.R. 6 in 2003. We welcome the opportunity to work with you and your colleagues as Congress develops legislation for what we hope is prompt and favorable action in 2005.

NMA represents producers of over 80 percent of the coal mined in the United States. Coal continues to be the reliable and affordable domestic fuel used to generate over 50 percent of the nation's electricity. NMA members also include producers of uranium – the basis for 20 percent of U.S. electricity supply. NMA represents producers of metals and minerals for which energy is a major cost of doing business. Finally, NMA includes manufacturers of processing equipment, mining machinery and supplies, transporters, and engineering, consulting, and financial institutions serving the mining industry.

NMA's statement today will first discuss the compelling need for comprehensive energy policy legislation and the importance of coal in our nation's energy mix. I will then focus on the proposed legislation as it relates to coal and the development of technologies that will ultimately lead to greater use of coal with near zero emissions. We greatly appreciate the bipartisan support for coal in the Committee as reflected in both the House-passed version of H.R. 6 in the 108th Congress and the conference report mentioned earlier. Therefore, we welcome the release last week of legislative language based on the H.R. 6 conference report as the framework for these hearings. While our comments focus on the matters under this Committee's direct jurisdiction, we are grateful for your support for Clean Coal Technology tax incentives and the production components that complement the program authorizations developed by this Committee.

Energy in the United States and the Need for a Balanced Energy Policy

Energy, whether it is from coal, oil, natural gas, uranium, or renewable sources, is the common denominator that is imperative to sustain economic growth, improve standards of living and simultaneously support an expanding population. The significant economic expansion that has occurred in the United States over the past two decades, and the global competitiveness of U.S. industry, have been due in large part to the availability of reliable and affordable energy, much in the form of electricity generally and in coal-fired electricity specifically. In the summer of 2000 this U.S. advantage in world markets began to break down as too much energy demand began chasing a relatively limited energy supply. As a result, prices of energy, especially of gasoline and natural gas, increased sharply. Spot shortages of electricity occurred.

Although short term measures were taken to address electricity supply issues, these were high cost solutions – mainly construction of peaking facilities using natural gas. This was a continuation of a decade old trend as almost all of the new power plants constructed since the

early 1990's have been gas-fired. This caused an over-reliance on one fuel that resulted in sharply higher prices for natural gas for consumers, industry and for electric generators.

According to the Energy Information Administration (EIA)[1], the average cost of natural gas to home consumers is 58 percent higher now than in 1999 (which was just before energy prices began to increase sharply). The cost of natural gas to manufacturers is 98 percent higher today, causing many manufacturers to close U.S. operations in favor of moving to offshore locations with lower energy costs. This has been particularly devastating to domestic chemical and fertilizer manufacturers and hence farmers and others who depend on those products. High natural gas prices have cost the United States over one million high paying manufacturing jobs that will not return to our country. Indeed, additional jobs will be lost without a national energy policy that addresses the serious need to increase domestic energy supplies and lower the real cost of energy to manufacturers.

There is no doubt that with our abundant domestic reserves, coal can play an even bigger role in the electric generation market in the years to come, thus freeing up supplies of natural gas for industry. Over time, there is also an increasing potential for greater coal gasification and coal liquefaction in the production of chemicals and other forms of energy such as hydrogen.

EIA's long range forecasts show that the trends experienced in the U.S. over the last 20 years - economic growth, greater efficiency and a move to higher electricity demand - are expected to continue over the next two decades. Real economic growth is forecast to increase by an average 3.1 percent per year through 2025. Reflecting greater efficiency, the use of energy will grow by a slower 1.4 percent per year on average or by a total of 35.5 percent to 133 quadrillion Btu. Consumption of all sources of energy will increase: petroleum by 39 percent, natural gas by 39 percent, coal by 34 percent and renewable energy by 37 percent. And, the

[1] Monthly Energy Review, January 2005, Section 9 'Energy Prices." Energy Information Administration.

economy will become even more dependent upon electricity over the next 20 years - consumption of electricity will increase by an average 1.8 percent per year, or by 45 percent over the next two decades. If the past is a guide, this electricity forecast is conservative.

At the same time, production of energy in the United States is expected to increase by only 0.7% annually on average - meaning that imports will have to increase or other measures taken. Coal is the only domestic source of energy that is expected to increase production sufficiently to meet demand. Imports of petroleum and petroleum products are expected to increase at a 2.4 percent per year rate and imports of natural gas are forecast to increase at a rapid 4.1 percent annual pace. We are becoming more, not less, dependent on foreign sources of energy to meet our energy needs. As energy demands increase globally, led by extraordinary economic growth in China and other developing countries, the United States will face very strong competition for foreign energy supplies. This alone is justification for a comprehensive national energy policy. A strategy that encourages expansion and use of domestic energy supplies, as well as conservation and efficiency, is imperative if the United States is to maintain an acceptable level of energy and economic security.

The lack of an energy policy has exacerbated the U.S. supply-demand imbalance. The U.S. is fortunate to have a large domestic energy resource base and an established, although aging, energy delivery infrastructure. To meet future demands, however, our energy policy must be redirected to one that encourages efficient, environmentally sound development of our nation's vast resource base and the use of technologically advanced methods to process, transport, and use that energy. Our strategy must be grounded in market oriented policies that lead to adequate, diverse, and secure supplies. A responsible policy will promote new energy technologies, limit use of "command and control" regulation, and support use of incentives.

Coal's Central Role in the U.S. Energy Mix – Present and Future

Coal reserves, which are geographically distributed throughout the U.S., comprise the greatest share of the nation's overall energy resource base. The demonstrated coal reserve is over 500 billion tons with economically recoverable reserves of over 275 billion tons. This is a reserve large enough to support coal demand for well over 200 years at current rates of use.

Of all our domestic energy resources, coal is the only source that has increased production over the last 25 years (although natural gas production, after declining, has returned to near 1980 levels). Coal production has increased from 830 million tons in 1980 to 1.111 billion tons from mines in 26 states in 2004. By 2025, EIA projects coal production of 1.488 billion tons. The coal industry contributes over $175 billion annually to the economy through payrolls and purchases of goods and services, while coal industry tax revenues add at least $2 billion annually to state and local government treasuries. The industry directly and indirectly employs nearly 1 million people and the employment opportunities continue to grow in what have become high-technology jobs in today's modern mines.

Electricity generated from coal is used in all 50 states. Last year more than 1 billion tons of coal generated over 50 percent of all electricity used in the U.S. The industrial market for coal (at approximately 32 million tons per year) and the domestic market for coking coal used in steel production (24-26 million tons per year) are important, but small in comparison to the power generation market. The U.S. also exports some coal, approximately 52 million tons in 2004.

The EIA forecast shows that by 2025, electricity use will increase by nearly 50 percent over today's levels. Coal use for electricity will total at least 1.425 billion tons in 2025, some 400 million tons, or 42 percent more than current levels. The reasons are straightforward: coal is domestic, reliable, affordable, and increasingly clean. Since 1980, while the amount of coal used

to generate electricity has grown 75 percent, emissions from coal-fueled power plants are 40 percent lower than in 1980. New advanced clean coal technologies will enable this trend to accelerate, allowing greater use of coal with increased efficiency and lower emissions of the criteria pollutants (SO2, NOx, and PM) and mercury as well as lower emissions of carbon dioxide both overall and per unit of electricity generated. In sum, coal is indispensable in the U.S. energy mix and as such will provide a major part of our nation's future requirements.

US Uranium Is Also an Important Part of the US Energy Mix

While NMA was asked to speak primarily about coal, we would be remiss if we did not point out that the United States uranium recovery industry is also essential in the nation's energy supply mix. Today, nearly 20 percent of America's electricity comes from nuclear power, which translates into the consumption of about 45 million pounds of uranium each year. However, the collapse in uranium prices since 1980 has produced a sharp decline in the viability of the U.S. uranium mining industry. America's remaining uranium miners produce only about 3 million pounds — or just 6 percent of nuclear utilities' annual uranium requirement. The balance of the uranium comes from rapidly declining inventories in the hands of the utilities, the federal government, and foreign entities.

Historically, the U.S. was the world's leading producer of uranium and still has extensive proven reserves of natural uranium that offer the potential for secure sources of future supply. Only a strong domestic uranium recovery industry can assure an adequate long-term supply to preclude threats of foreign supply disruptions or price controls that could adversely affect the nation's security. Therefore, the federal government must foster policies that ensure a strong and viable domestic uranium industry and remove barriers to domestic production of existing sources of uranium. The proposed legislation will assist in this goal by authorizing uranium research.

How Energy Policy Legislation Supports Fuel Diversity

Following the model of H.R. 6 in the 108th Congress, the Energy Policy Act of 2005 should continue to have many provisions that, once enacted, will encourage greater use of coal for electric generation with continuing improvements in the environment through further reduction of emissions associated with coal use. Ultimately, if the programs included in the bill are fully funded, the resulting suite of advanced clean coal technologies that will be developed will mean that emissions from coal fueled power could be near zero.

Without a doubt, the nation will continue to rely on the existing 876.3 GW[2] generating fleet (including 303 GW of coal-fueled capacity from over 1,000 coal fueled power plants) to meet electricity demand. But that is not enough to satisfy the 50 percent increase in electricity that will be required by 2025. Between now and 2025, at least 263 GW of new electric generating capacity must be built to meet new demand and to replace the capacity that will be retired in this period. As coal generation is expected to increase by nearly 50 percent, the nation must rely on both the existing coal-fueled fleet and at least 100GW of new coal capacity that must be built during this time [3]

H.R. 6 included provisions that support the research, development and deployment programs that are necessary to ensure that advanced clean coal technologies are available for use in this new fleet by having been commercially proven on a timely basis. This research work should include projects to develop technologies to capture and sequester carbon. Such technologies provide an option to address carbon-related concerns by actually reducing emissions without harming the U.S. economy, as would occur from unilateral emissions caps.

[2] Existing net summer capacity for electricity generators and independent power producers on January 1, 2004. This capacity does not include combined heat and power plants, or generating capacity used for commercial and industrial uses only. Source: EIA, Electric Power Annual 2003.
[3] Annual Energy Outlook, 2005.

As in H.R. 6 from the 108th Congress and in the draft coal provisions of the Energy Policy Act of 2005, comprehensive energy legislation should include authorizations and program requirements for:

- A five year basic coal research and development program:
- The Clean Coal Power Initiative; and
- Chairman Barton's cutting-edge Clean Air Coal Program.

Basic Coal Research and Development

The 2005 version of an energy bill should continue to authorize a $1.4 billion basic coal research and development program centered on a suite of technologies to be carried out by the Department of Energy. This basic research is important to advance coal generation and also to advance other uses of coal as over time coal can be converted into liquid fuels and into hydrogen for fuel cells – among other new uses.

The stated purpose of the program is to facilitate production and generation of coal based power through innovations for existing plants, research to improve integrated gasification combined cycle plants, advanced combustion systems, turbines for synthesis gas derived from coal, carbon capture and sequestration research, coal derived transportation fuels and chemicals, solid fuels and feed stocks, advanced coal-related research, advanced separation technologies and other technologies that make the most and best use of our abundant domestic coal reserves.

The initial thrust of the program is electricity generation and continual improvement in the quality of our environment, which is as important as the availability of affordable electricity. Technologies developed by DOE coal research programs have already achieved commercial success, contributing to the sharp decline in emissions of criteria pollutants over the last three decades as the nation's air quality has greatly improved during that time period.

It is important to continue and expand these research programs, to develop coal-based generation technologies that further improve efficiency, environmental performance, and cost competitiveness beyond that of facilities in service or demonstrated to date. These technologies should include a coal based zero emissions electricity and hydrogen project. Research to find ways to capture, sequester, and dispose of carbon dioxide should be accelerated so that cost effective technologies are available to do so. This program correctly encourages research on a suite of technologies, rather than have Congress picking technology winners and losers, as it would not be prudent to focus and depend on only one technology pathway.

Importantly, this program also includes research on technologies that use coal in non-traditional ways such as liquefaction. Over time, technology advancements will allow cost effective conversion of coal to hydrogen and coal to oil. Development of new technologies takes time and it is prudent to advance research now on technologies to use coal in different ways so that they are commercially available in future years.

The Clean Coal Power Initiative

The Clean Coal Power Initiative (CCPI) is a $2 billion, 10 year program designed to demonstrate commercial coal based applications of technologies for new and existing coal fired plants that will advance efficiency, environmental performance and cost competitiveness beyond that of facilities that are in commercial service today. It is a demonstration program to move a suite of technologies from bench scale to demonstration on a commercial scale.

CCPI builds upon the DOE Clean Coal Technology program that has already had a number of successes. For example, low NOx burner technology developed through the program is now on 75 percent of U.S. coal fired power plants. The program has also resulted in scrubber technology that has nearly halved capital and operating costs for sulfur removal.

The CCPI provides funding for a necessary part of development – the demonstration of technologies at commercial scale. This step is a costly process and one that cannot readily be undertaken by private industry alone. However, it is also important to stress that the CCPI program is a DOE–industry partnership. The legislation continues the practice of requiring a 50 percent private sector cost share.

The CCPI is in addition to completion of the important FutureGen project, a jointly funded industry-government partnership to construct a commercial scale integrated gasification combustion technology plant with carbon sequestration. We are pleased that the proposed DOE budget for FY2006 continues FutureGen as a budget priority.

The Clean Air Coal Program

This title from the H.R. 6 conference report provides a $2 billion authorization for the Department of Energy to carry out a new clean coal technology deployment program to accelerate the use of technologies that have been demonstrated (they are beyond the CCPI program) but not yet adopted for widespread commercial use. The program is in two phases. In Phase One (FY2006 through FY2010) projects are authorized for a total of $500 million and must address the immediate needs of the power industry to have a broad selection of pollution control equipment that can be installed on existing power plants. This is an important program to help existing units comply with the additional SO2, NOx, and mercury reductions that will be required either by regulation or through enactment of multi-emissions legislation such as the proposed Clear Skies Act. Phase Two is an authorization of $1.5 billion over FY2007 through FY2012 to promote new coal generation technologies to meet new demand or replace existing capacity. Again, this is designed to move technologies beyond the demonstration stage to actual commercialization; thus each of these programs is complementary to one another.

The Clean Air Coal Program will mitigate the financial risks associated with early commercialization of new technologies. It is specifically designed to help utilities meet both current and future obligations under the Clean Air Act through loans or loan guarantees, but the total federal amount will be limited to 50 percent of the cost of a given project. The funds will be available to those utilities installing pollution control technologies that meet efficiency and emissions reduction requirements established by the Secretary of Energy.

This program will assist utilities with funding the multi-billion dollar capital expenditures that will be required over the next 10 years to reduce emissions. It will facilitate the use of coal to ease the natural gas crisis even as emission requirements are ratcheted downward. In turn, this will free up natural gas for industrial uses to benefit the economy by making our manufacturing base more competitive and by preventing additional jobs from exiting the country.

Matters Not to Include in a Comprehensive Energy Bill

Mr. Chairman, while our testimony focuses on the important coal-related provisions to include in a comprehensive energy bill, it is also important to stress what matters should be left out if we are to make the most use of our abundant coal reserves. The Conferees on the part of the House have consistently acted on a bipartisan basis to reject proposals from the other body for an ill-advised Renewable Portfolio Standard (RPS) and for mandatory carbon-related provisions. Decisions about an RPS are best left to the States for a variety of reasons, including differences in regional energy resources as well as the impact on electricity costs. As noted earlier, several of the research programs we support include carbon sequestration and other technology-based approaches, including those that promote energy efficiency. We continue to believe that is the right approach because it will be far more effective than unilateral mandatory restrictions on U.S. carbon emissions.

Conclusion

Mr. Chairman, enactment of comprehensive energy legislation is not easy. Congress has not turned a comprehensive energy bill into law since 1992 – well over a decade ago. But, for all the reasons stated earlier, the hard work of the past several Congresses must result in enactment this year of a balanced, comprehensive bill. Our economy, energy security, and environment will all improve with timely enactment and implementation of comprehensive energy legislation.

Mr. Chairman, we have always been a "can-do" country in which technological advancement is among our major achievements. We have the domestic coal resources to help power the country forward in the globally competitive times in which we live. We must do so while continuing to meet the public's environmental expectations. NMA's energy producers and manufacturers look forward to working with you to make us more competitive while continuing to improve the environment. Thank you again for the opportunity to testify at today's hearing.